TEXT IN THE FIGURES

FIG. 1
SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
INPUT --> PARAMETER DATA INPUT MEANS 12
DATA ADJUSTMENT PROCESSOR 13
MAIN CONTROLLER 14
LOGO DATA IMAGE DISPLAY 15
LOGO DATA OUTPUT MEANS 16

FIG. 2
PICTURE, PHOTOGRAPH, OR OTHER IMAGE 80
LOGO EDITING TOOL 2
SOURCE DATA 3
LOGO DATA GENERATING APPARATUS 4
PRINTER 60
IMAGING EDITING TOOL 81
IMAGE FILE 82
BITMAP FILE 83
LOGO REGISTRATION FILE 5
POS TERMINAL HOST SYSTEM 50

FIG. 3
IMAGE DATA CAPTURING MEANS 31
IMAGE DATA STORAGE 32
IMAGE DATA PROCESSOR 33
TEXT DATA EDITOR 34
IMAGE DRAWING UNIT 35
DATA MERGING UNIT 36
SOURCE DATA OUTPUT UNIT 37
EDIT INPUT UNIT 38
IMAGE DATA DISPLAY UNIT 39

FIG. 4
SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
PARAMETER DATA INPUT MEANS 12
DATA ADJUSTMENT PROCESSOR 13

MAIN CONTROLLER 14

LOGO DATA IMAGE DISPLAY 15

LOGO DATA OUTPUT MEANS 16

IMAGE REDUCTION PROCESSOR 17

FIG. 5

SOURCE DATA CAPTURE UNIT 10

SOURCE DATA IMAGE DISPLAY 11

PARAMETER DATA INPUT MEANS 12

DATA ADJUSTMENT PROCESSOR 13

MAIN CONTROLLER 14

LOGO DATA IMAGE DISPLAY 15

LOGO DATA OUTPUT MEANS 16

IMAGE REDUCTION PROCESSOR 17

FIG. 6

DATA ADJUSTMENT PROCESSOR 13

REGISTRATION COMMAND SET GENERATOR 22

PARAMETER INPUT COMMAND SET GENERATOR 24

PORT DETECTION COMMAND SET GENERATOR 25

TRANSMISSION COMMAND SET GENERATOR 26

LOGO REGISTRATION FILE GENERATOR 27

INTERFACE 21

--> TO STORAGE OR RECORDER

--> TO TRANSMISSION LINE

FIG. 7

LOGO EDITING PROCESS

S101 READ IMAGE DATA?

S102 READ AND STORE

S103 DRAWING, TEXT INPUT?

S104 DRAWING, TEXT INPUT PROCESS

S105 CHANGE SIZE AND MERGE IMAGE AND TEXT OBJECTS

S106 END INPUT?

S107 OUTPUT SOURCE DATA

END

FIG. 8

SOURCE FILE   REFERENCE
PRINTER DATA
     NAME
     PAPER WIDTH
     COLOR 1
     COLOR 2
     RESOLUTION
        VERTICAL
        HORIZONTAL
COMMUNICATIONS
     PORT
     BAUD RATE
     BIT LENGTH
     PARITY
     FLOW CONTROL
PROPERTIES
NEW PREVIEW   SAVE TO FILE   MEMORY MANAGEMENT
EDIT TEST PRINT   SAVE TO PRINTER   QUIT

FIG. 9
FILE   EDIT   DISPLAY   TOOLS
READY

FIG. 10
COORDINATES
PLEASE INPUT THE LOGO SIZE.
     WIDTH (W):   512 DOTS
     HEIGHT (H): 341 DOTS
     OK   CANCEL

FIG. 11
TEXT PROPERTIES
FONT   STYLE   SIZE   OK/CANCEL
      STANDARD
      ITALIC
      BOLD
      BOLD ITALIC   SET TEXT COLOR
ATTRIBUTES   SAMPLE

OVERSTRIKE
UNDERLINE
ROTATE   0 DEGREES

FIG. 12
IMAGE PROPERTIES   OK/CANCEL
FILE NAME
PREVIEW   DRAWING MODE
                 OPAQUE
                 TRANSPARENT

FIT TO PAPER

FIG. 13
COORDINATES   OK/CANCEL
START COORDINATES
END COORDINATES

FIG. 14
CREATE LOGO
S201 CAPTURE SOURCE DATA (SELECT FILE)
S202 DISPLAY IMAGES OF SOURCE DATA AND LOGO DATA
S203 OBJECT SELECTED?
S204 READ AND DISPLAY OBJECT
S205 IMAGE PROCESSING PARAMETERS INPUT?
S206 PROCESS OBJECT
S207 DISPLAY OBJECT AFTER PROCESSING
S208 OUTPUT LOGO?
S209 SAVE SETTINGS?
S210 OUTPUT LOGO DATA
END

FIG. 15
SOURCE FILE   REFERENCE
PRINTER DATA
     NAME
     PAPER WIDTH
     COLOR 1
     COLOR 2

RESOLUTION
     VERTICAL
     HORIZONTAL
COMMUNICATIONS
     PORT
     BAUD RATE
     BIT LENGTH
     PARITY
     FLOW CONTROL
PROPERTIES
     OBJECT
     HALFTONE
     COLOR REDUCTION
     BRIGHTNESS
     GRAY SCALE
     COLOR   BLACK

| NEW | PREVIEW | SAVE TO FILE | MEMORY MANAGEMENT |
| EDIT | TEST PRINT | SAVE TO PRINTER | QUIT |

FIG. 16

PROPERTIES
     OBJECT   TEXT 2
     TEXT   ABC TRADING
     COLOR   BLACK

FIG. 17

CONVERT 8 COLOR DATA TO 15 COLORS
PRINT COLOR
     COLOR 1   COLOR 2
     BLACK   RED
SOURCE DATA
PREVIEW
COLOR ASSIGNMENT
     BLACK
     BLUE
     RED
     MAGENTA
     GREEN

CYAN
YELLOW
WHITE

CONVERT 8 COLOR DATA TO 3 COLORS
PRINT COLOR

COLOR 1	COLOR 2
BLACK	RED

SOURCE DATA
PREVIEW
COLOR ASSIGNMENT

BLACK		FIRST	SECOND
BLUE	FIRST	SECOND	
RED	FIRST	SECOND	
MAGENTA	FIRST	SECOND	
GREEN		FIRST	SECOND
CYAN	FIRST	SECOND	
YELLOW	FIRST	SECOND	
WHITE		FIRST	SECOND

FIG. 18
SLIDER 251

FIG. 19
PRINTER MEMORY MANAGEMENT
NV GRAPHIC KEY CODES
LIST KEY CODES 261
SELECT ALL
CLEAR SELECTION
PRINT   DELETE   CLOSE

FIG. 20
GENERATE LOGO REGISTRATION FILE
S310 CREATE LOGO DATA
S330 GENERATE COMMAND DATA SET
S340 GENERATE LOGO REGISTRATION FILE
S350 OUTPUT LOGO REGISTRATION FILE
END

FIG. 21

S330 GENERATE COMMAND DATA SET

S331 GENERATE REGISTRATION COMMAND SET

S332 ADD DATA TRANSMISSION COMMAND SET?

S333 GENERATE DATA TRANSMISSION COMMAND SET

S334 INCLUDE PORT DETECTION COMMAND SET?

S335 GENERATE PORT DETECTION COMMAND SET

S336 GENERATE PARAMETER INPUT COMMAND SET

TO S340

FIG. 22

S340 GENERATE LOGO REGISTRATION FILE

S341 ADD REGISTRATION COMMAND SET

REGISTRATION COMMAND || LOGO DATA

S342 DATA TRANSMISSION COMMAND SET DETECTED?

S343 PORT DETECTION COMMAND SET DETECTED?

S344 ADD PORT DETECTION COMMAND SET

S345 ADD DATA TRANSMISSION COMMAND SET

DATA TRANSMISSION COMMAND SET || REGISTRATION COMMAND SET ||
LOGO DATA

S346 ADD PARAMETER INPUT COMMAND SET

TO S350

FIG. 23

APPLICATION 70

CONTROL OBJECT (CO) 71

SERVICE OBJECT (SO) 72

OPERATING SYSTEM (WIN) 73

DEVICE (POS PRINTER) 74

FIG. 24

COLORS 401

COLOR CONVERSION METHOD

     FIXED

     BRIGHTNESS

         BRIGHT   DARK

COLOR

COLOR 1
        BLACK
COLOR 2
        BLACK
OK   CANCEL   APPLY

FIG. 25
SOURCE DATA CAPTURE UNIT 10
SOURCE DATA IMAGE DISPLAY 11
LOGO DATA IMAGE DISPLAY 15
PARAMETER INPUT --> PARAMETER DATA INPUT MEANS 12
TEMPORARY SOURCE DATA BUFFER 6
IMAGE PROCESSING MEANS 7
OBJECT READ/WRITE CONTROLLER 8
LOGO DATA STORAGE 9
DATA ADJUSTMENT PROCESSOR 13
MAIN CONTROLLER 14
LOGO DATA OUTPUT MEANS 16

FIG. 27
IMAGE DATA OR OBJECT --> IMAGE DATA STORAGE 46
HALFTONE PROCESSOR 47
GRAY SCALE IMAGE MEMORY 48
COLOR SELECTION INPUT --> COLOR ASSIGNMENT PROCESSOR 49 -->
OUTPUT
CONTROL SIGNAL

FIG. 28
SOURCE DATA 3
IMAGE PROCESSING (COLOR REDUCTION) 56
IMAGE REDUCTION PROCESS 57
TO PRINTER OR OUTPUT FILE
IMAGE DISPLAY 58
SOURCE DATA IMAGE   LOGO IMAGE

FIG. 29
LOGO DATA CREATION
S401 CAPTURE SOURCE DATA

S402 SOURCE DATA REDUCTION PROCESS

S403 DISPLAY SOURCE DATA IMAGE

S404 IMAGE PROCESSING PARAMETER INPUT

S405 IMAGE PROCESS SOURCE DATA A

S406 IMAGE PROCESS REDUCED IMAGE A

S407 SAVE PARAMETERS?

S408 OUTPUT LOGO DATA

FIG. 30

IMAGE 1   IMAGE 1'

IMAGE 2   IMAGE 2'

PROPERTIES

    OBJECT   IMAGE 2

               IMAGE 1

    HALFTONE

    COLOR REDUCTION METHOD

        COARSE   FINE

    BRIGHTNESS

        BRIGHT   DARK

    GRAY SCALE

        COLOR   BLACK

FIG. 31

PROPERTIES

HALFTONE

    COLOR REDUCTION METHOD

        COARSE   FINE

    BRIGHTNESS

        BRIGHT   DARK

    GRAY SCALE

        COLOR   BLACK

FIG. 32

TWO-COLOR PRINT DATA GENERATOR 101

HOST 102

TWO-COLOR PRINTER 103

HOST [TWO-COLOR PRINT DATA GENERATOR] --> TWO-COLOR PRINTER

HOST --> TWO-COLOR PRINTER [TWO-COLOR PRINT DATA GENERATOR]

HOST [TWO-COLOR PRINT DATA GENERATOR] --> TWO-COLOR PRINTER
[TWO-COLOR PRINT DATA GENERATOR]

FIG. 33
COLOR-REDUCED IMAGE DATA GENERATOR 201
COLOR CONVERSION UNIT 202
PRINT DATA CONVERSION UNIT 203
HOST --> COLOR CONVERSION SELECTION UNIT 204
PRINT DATA GENERATING UNIT 205
HOST --> FULL-COLOR DATA STORAGE 211
REDUCED-COLOR IMAGE DATA MEMORY 212
COLOR-CONVERTED IMAGE DATA STORAGE 213
PRINT DATA MEMORY 214 --> TWO-COLOR PRINTER
SETTINGS STORAGE 215

FIG. 34
FULL-COLOR IMAGE
COLOR REDUCTION PROCESS
REDUCED-COLOR IMAGE
　　　RED, GREEN, BLUE, CYAN, MAGENTA, YELLOW, BLACK, WHITE
COLOR CONVERSION PROCESS
COLOR-CONVERTED IMAGE
　　　RED: SECONDARY COLOR
　　　BLACK: MAIN COLOR
　　　WHITE: BACKGROUND COLOR

FIG. 35
COLOR
　　　K (= BLACK)
　　　B (= BLUE)
　　　G (= GREEN)
　　　C (= CYAN)
　　　R (= RED)
　　　M (= MAGENTA)
　　　Y (= YELLOW)
　　　W (= WHITE)
R (= RED)
G (= GREEN)

B (= BLUE)

MAIN COLOR K (= BLACK)   B (= BLUE)

SECONDARY COLOR R (= RED)   R (= RED)

      K (= BLACK) B (= BLUE)

      R (= RED)   R (= RED)

      R (= RED)   R (= RED)

      R (= RED)   R (= RED)

      R (= RED)   R (= RED)

      R (= RED)   R (= RED)

      R (= RED)   R (= RED)

      W (= WHITE)W (= WHITE)

FIG. 36

TWO-COLOR PRINT DATA GENERATING PROCESS

S501 GET FULL-COLOR IMAGE DATA

S502 COLOR REDUCTION PROCESS

S503 STORED REDUCED-COLOR IMAGE DATA

S504 GET COLOR CONVERSION PROCESS SETTINGS

S505 DETERMINE COLOR CONVERSION METHOD

FIXED CONVERSION

S506 GENERATE COLOR-CONVERTED IMAGE DATA USING FIXED CONVERSION METHOD

S507 STORE COLOR-CONVERTED IMAGE DATA

S508 GENERATE TWO-COLOR PRINT DATA

S509 STORE TWO-COLOR PRINT DATA

ADJUSTABLE CONVERSION

S514 GENERATE COLOR-CONVERTED IMAGE DATA USING ADJUSTABLE CONVERSION METHOD

S515 STORE COLOR-CONVERTED IMAGE DATA

S516 GENERATE TWO-COLOR PRINT DATA

S517 STORE TWO-COLOR PRINT DATA

END

FIG. 37

SETTING COLOR CONVERSION PROCESS PARAMETERS

S601 SET MAIN COLOR AND SECONDARY COLORS

S602 SET COLOR CONVERSION METHOD

S603 DETERMINE COLOR CONVERSION METHOD

VARIABLE CONVERSION

S605 SET CONVERSION PROCESS PARAMETERS

FIXED CONVERSION

S606 STORE COLOR CONVERSION PROCESS PARAMETERS

END